

# memorandum

DATE: August 5, 2004

REPLY TO

ATTN OF: Office of Energy Efficiency and Renewable Energy,  
Federal Energy Management Program (FEMP), EE-2L

SUBJECT: Reporting Guidance for FY 2004 Annual Report on Federal Government Energy Management and Conservation Programs

TO: Federal Agency Energy Coordinators

This purpose of this memo is to communicate Federal agencies' requirements and due dates for annual reporting on energy management activities mandated by the National Energy Conservation Policy Act (NECPA), Energy Policy Act of 1992 (EPACT), and Executive Order 13123 *Greening the Government Through Efficient Energy Management*. The Department of Energy's (DOE) Federal Energy Management Program (FEMP) has prepared the FY 2004 reporting guidance to address all of the requirements while minimizing the reporting burden placed on agencies.

Information and data collected from the agencies will be used to develop DOE's FY 2004 *Annual Report to Congress on Federal Government Energy Management Programs* and the Office of Management and Budget's (OMB's) summary report of agency energy scorecards to the President. These reports describe energy management activities in Federal facilities and operations and progress in implementing the requirements of NECPA, EPACT, and Executive Order 13123.

In a related reporting action through agency budget offices, OMB Circular A-11 requires reporting on the funding that agencies request to implement energy efficiency measures. In addition to reporting on funding requested to implement Executive Order 13123, Circular A-11 also requires reporting on funding requested to carry out Executive Order 13149 on Federal Fleet and Transportation Efficiency. Agency budget offices will be contacted by OMB with details on this requirement. More information on this separate reporting action can be found at [www.whitehouse.gov/omb/circulars/a11/current\\_year/s25.pdf](http://www.whitehouse.gov/omb/circulars/a11/current_year/s25.pdf).

As directed by Executive Order 13123, the following items are required to be submitted to DOE by **January 1, 2005**:

- (1) FY 2004 Agency Annual Report on Energy Management (satisfying agency requirements for NECPA/EPACT Annual Report to Congress and E.O. 13123 Annual Report to the President). This includes the Annual Energy Management Data Report with *final* energy consumption and cost data for 2004 and required narrative.

- (2) FY 2004 Federal Agency Energy Scorecard. DOE will forward Agency Scorecards directly to the Deputy Director of Management at OMB as required under Executive Order 13123.
- (3) FY 2005 Agency Energy Management Implementation Plan.

The Reporting Guidance for the FY 2004 Annual Report on Federal Agency Energy Management (Attachment 1 to this memo) provides an outline for what should be included in each agency's narrative report. This guidance references more detailed guidelines and documents that are not included, but are available on FEMP's web site at:  
[www.eere.energy.gov/femp/about/legislation.cfm](http://www.eere.energy.gov/femp/about/legislation.cfm).

A blank Annual Energy Management Data Report and instructions for completing the form comprise Attachment 2 to this memo. Electronic versions of data and reports are encouraged in addition to official paper submissions. An electronic version of the Energy Management Data Report in Excel is available on FEMP's web site at  
[www.eere.energy.gov/femp/about/reporting\\_guidance.cfm](http://www.eere.energy.gov/femp/about/reporting_guidance.cfm).

The blank FY 2004 Federal Agency Energy Scorecard is included as Attachment 3 of this reporting guidance. OMB will use the FY 2004 Energy Scorecard to evaluate agencies' progress toward meeting the goals of Executive Order 13123. The information required on the Scorecard is summary level data that agencies will have already compiled for their other reports.

Attachment 4 to this memo contains guidance for agencies to use in developing their FY 2005 Annual Energy Implementation Plan, required by the Executive Order 13123. The FY 2005 Implementation Plan should be prepared as a stand-alone document and submitted with the Annual Report by January 1, 2005.

A unit conversion chart comprises Attachment 5 to this memo. This should be useful reference for agencies when preparing their annual reports.

The requested information should be sent to:

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U.S. Department of Energy  
1000 Independence Ave., SW  
Washington, DC 20585-0121  
[Rick.Klimkos@ee.doe.gov](mailto:Rick.Klimkos@ee.doe.gov)

If you have any questions, please contact Rick Klimkos at (202) 586-8287. Thank you for your cooperation and diligence in promoting energy efficiency. With your help, I am confident that we can achieve the President's energy efficiency goals and save taxpayer dollars.

Schuyler (Skye) Schell  
Acting Program Manager  
Federal Energy Management Program  
Office of Energy Efficiency and Renewable Energy

Attachments:

- |              |   |
|--------------|---|
| Attachment 1 | Reporting Guidance for FY 2004 Federal Agency Annual Report on Energy Management            |
| Attachment 2 | Annual Energy Management Data Report  |
| Attachment 3 | Federal Agency Energy Scorecard for FY 2004   |
| Attachment 4 | Guidance for Preparing the Federal Agency Energy Management Implementation Plan for FY 2005 |
| Attachment 5 | Reporting Units and Conversion Factors for Federal Energy Management Reporting              |

## **ATTACHMENT 1**

### **Reporting Guidance for FY 2004 Federal Agency Annual Report on Energy Management**

## OUTLINE AND INSTRUCTIONS FOR THE ANNUAL REPORT

- I. MANAGEMENT AND ADMINISTRATION.** This section will describe (1) the agency's establishment of an energy management infrastructure and (2) the agency's use of management tools to implement Executive Order 13123.

### **A. Energy Management Infrastructure**

- 1. Senior Agency Official.** Identify the agency's senior energy official and describe the official's role and responsibilities.
- 2. Agency Energy Team.** Identify the members of the team and describe the team's responsibilities.

### **B. Management Tools**

- 1. Awards (Employee Incentive Programs).** Describe the agency's use of employee incentive programs to reward exceptional performance in implementing Executive Order 13123.
- 2. Performance Evaluations.** Describe agency efforts to include successful implementation of provisions of Executive Order 13123 in the position descriptions and performance evaluations of senior energy officials, members of the agency energy team, heads of field offices, and facility/energy managers.
- 3. Training and Education.** Describe activities undertaken to ensure that all appropriate personnel receive training for energy management requirements. (Note: The number of employees trained will be reported on the agency's Data Report and Energy Scorecard. Expenditures on training will also be reported on the Data Report). Describe agency outreach programs that include education, training, and promotion of ENERGY STAR<sup>®</sup> and other energy efficient and low standby power products for Federal purchase card users.
- 4. Showcase Facilities.** Highlight exemplary new or existing facilities that the agency has designated Showcase Facilities in FY 2004. Describe why the facilities are considered Showcase Facilities (i.e., discuss the facility design, the improvements made in energy or water efficiency, the use of renewable energy, etc.).

- II. ENERGY EFFICIENCY PERFORMANCE.** This section will highlight data calculated for reporting on the Data Report and the Energy Scorecard. The purpose of the section is to provide narrative information in support of these data.

### **A. Energy Reduction Performance**

- 1. Standard Buildings.** Report energy use for standard buildings in units of Btu-per-gross-square-foot (Btu/GSF) for FY 1985 (the base year) and FY 2004. Report the percent change from FY 1985 and from FY 2003. (Note: This information will be reported on the agency's Energy Scorecard). Discuss any extenuating factors that may be skewing the accuracy of this performance measure.

**Site-Delivered vs. Source Energy**—The factors used for converting the reporting units to Btu have a significant impact on how performance toward the energy efficiency goals and other goals of E.O. 13123 are measured. “Energy use” is defined as the energy that is used at a building or facility and measured in terms of energy delivered to the building or facility. Recognizing this, OMB and DOE will use Btu based on the site conversion factors for both electricity and steam as the primary measure of performance. However, because carbon emissions are generally proportional to source energy use, reductions in source Btu will also be considered more seriously than in the past.

The conversion factor for electricity of 3,412 Btu per kilowatt hour, the rate of consumption by the end-user on site, will be used for measuring performance. The difference between the site conversion rate and the estimated source conversion rate of 11,850 Btu per kilowatt hour is attributable to conversion losses associated with electric generation, as well as losses from transmission and power plant use. The site conversion factor for purchased steam is 1,000 Btu per pound. Generation inefficiencies and distribution losses are included in the source conversion factor of 1,390 Btu per pound.

**Leased Space**—Each agency that controls its Federally-owned building space or directly pays the utilities in its leased space will report to DOE the agency’s aggregate energy consumption for various fuel types (see Data Report instructions). Reporting on leased buildings may pose some difficulty depending on the nature of the lease (partially serviced, fully serviced). In cases where an agency is responsible for paying utility bills for space that is leased, the agency is expected to report energy consumption for the leased space to DOE. If an agency is leasing from the General Services Administration, GSA is responsible for reporting.

**Delegated Space**—Agencies that have been delegated responsibility by GSA for operation and maintenance of buildings they occupy are required to report, to DOE, energy consumption for these buildings during the years the buildings are under their control. An agency should *not* adjust the FY 1985 baseline to reflect the addition of buildings delegated by GSA if those buildings were not under the agency’s control during the base year period. The FY 1985 consumption and square footage of any building delegated after FY 1985 is included in GSA’s FY 1985 baseline. To also include this square footage and consumption in the agency’s baseline would result in double reporting. The impact of delegation activity on the Btu/GSF rates of most agencies should be minimal. In cases where building delegations account for a large increase in the percentage of an agency’s building inventory and its Btu/GSF is greatly impacted, this situation will be documented in the text of DOE’s Annual Report to Congress.

**Lack of Base Year Data**—Comparisons to a FY 1985 base year will not be possible for agencies that had no buildings under their control during the base year. Where comparisons to the FY 1985 base year are not possible, that specific item in the data table will be footnoted as “not applicable” in the report. In order to maintain accurate data and comply with the legislation, FEMP will work with relevant agencies to determine alternative approaches that would minimize double counting, but provide comparative information on Btu/GSF consumption.

2. **Industrial and Laboratory Facilities.** Identify the facility inventory subject to this goal, referencing Section IV, Part D that lists the buildings included. Describe the performance measure(s) used (Btu/square foot, Btu/production unit, etc.). (Refer to FEMP web site for the guidance document *Section 203 Performance Goals for Industrial, Laboratory, Research, and Other Energy-Intensive Facilities* [www.eere.energy.gov/femp/pdfs/eoguidancedoc.pdf](http://www.eere.energy.gov/femp/pdfs/eoguidancedoc.pdf)).

Report energy use (in the designated performance measure) for industrial and laboratory facilities for FY 1990 (the base year) and FY 2004. Report the percent change from FY 1990 and from FY 2003. (Note: This information will be reported on the agency’s

Energy Scorecard). Discuss any extenuating factors that may be skewing the accuracy of this performance measure.

3. **Exempt Facilities.** Refer to Section IV E—a list of exempt facilities and an explanation of why they were exempted. (Refer to DOE’s *Criteria for Exempting Facilities from the Goals of Executive Order 13123 and Guidance for Reporting Exemptions* [www.eere.energy.gov/femp/pdfs/eoguidancedoc.pdf](http://www.eere.energy.gov/femp/pdfs/eoguidancedoc.pdf) ).

Although buildings found exempt according to the criteria are not subject to the requirements of Sections 202 and 203 of Executive Order 13123, DOE will continue to collect energy consumption data for these buildings under the reporting category of “Exempt Buildings.” This ensures that accurate reporting on overall Federal energy consumption is maintained.

4. **Non-Fleet Vehicle and Equipment Fuel Use.** Refer to the Data Report to identify the fuel use for non-fleet vehicles and other equipment not captured by the Federal Automotive Statistical Tool (FAST) reporting system. Discuss trends in the use of each type of fuel and methods employed to reduce fuel use.

**Vehicle Fleet Consumption**—In the past, GSA’s Agency Report of Motor Vehicle Data (Form SF-82) collected acquisition, fuel consumption, and fuel cost data for motor vehicles directly from vehicle fleet managers. The SF-82 was replaced by the Federal Automotive Statistical Tool (FAST), an internet-based reporting platform. FAST eliminates the need to report fuel consumption data for fleet motor vehicles to FEMP on the Data Report. FAST now collects this data, including alternative fuel consumption data reported under Sections 303 and 308 of EPACT, and this information is forwarded to FEMP for inclusion in the Annual Report to Congress. For more information on FAST, please contact Shab Fardanesh of DOE’s Vehicle Technologies Program at (202) 586-7011.

- B. **Renewable Energy.** Discuss agency’s policy and efforts to encourage purchase and generation of electricity and thermal energy from renewable energy sources. (Note: The quantitative information related to this section [see below] will be reported on the agency’s Data Report and Energy Scorecard. On the Energy Scorecard, self-generated renewable energy use and purchased renewable energy use will be aggregated into a single value).

1. **Self-generated renewable energy.** Identify/estimate energy use from electricity self-generated from renewable sources (photovoltaics, wind turbines) and renewable energy thermal projects (solar thermal, biomass, geothermal). Also report energy generated on Federal lands or by projects facilitated by your agency, but which may be sold to other parties. Agencies should report the annual energy generated from all renewable energy systems installed after 1990 and in place during FY 2004.
2. **Purchased renewable energy.** Identify the renewable (i.e., wind, solar, geothermal, biomass) energy component of power purchases under competitive contract in megawatt-hours. Agencies should report what portion of total purchased renewable energy should be applied to standard buildings, energy intensive facilities, or exempt facilities. (Note: Guidelines for counting renewable energy projects and purchases of electricity from renewable energy sources toward agency progress in reaching their goals and information on the Federal renewable energy goal are available on the FEMP web site [www.eere.energy.gov/femp/pdfs/eoguidancedoc.pdf](http://www.eere.energy.gov/femp/pdfs/eoguidancedoc.pdf).)

- C. Petroleum.** Identify petroleum-based fuels (fuel oil, LPG/propane) used in buildings in FY 1985 and in FY 2004 and the percentage change from FY 1985. (Note: The FY 2004 data will be reported on the Data Report and the Energy Scorecard).
- D. Water Conservation.** Identify/estimate water consumption and cost by the agency in FY 2004 and outline any agency-specific issues related to collection of water consumption data. (Note: This information will be reported on the Data Report and the Energy Scorecard.) Also in this section, highlight activities undertaken to improve water efficiency. Discuss progress in developing Water Management Plans and implementing Best Management Practices for efficient use of water. For more information, refer to DOE's *Guidance to Federal Agencies for Determining Baseline Water Usage* and *Guidance to Establish Water Efficiency Improvement Goal for Federal Agencies* on the FEMP web site [www.eere.energy.gov/femp/pdfs/eoguidancedoc.pdf](http://www.eere.energy.gov/femp/pdfs/eoguidancedoc.pdf).

**III. IMPLEMENTATION STRATEGIES.** The purpose of this section is to identify and describe the use of strategies to reduce energy consumption and improve energy efficiency. It is not expected that each agency will have employed every strategy; rather, each strategy identified in Executive Order 13123 is listed as a subsection to remind agency officials of the existence of these strategies and to encourage their use where practical and life-cycle cost effective.

In each of the following subsections, present highlights for each of the strategies that were used. If certain strategies were not used, explain why not. Please provide narrative where strategies that were identified as focal points in the previous year's Implementation Plan were successful, where challenges existed in implementing strategies, and how challenges were overcome.

- A. Life-Cycle Cost Analysis.** Outline procedures in place to ensure the use of life-cycle cost analysis in making investment decisions about in products, services, construction, and other projects to lower the Federal Government's costs and to reduce energy and water consumption. Highlight examples where life-cycle cost analysis was used in capital budgeting decisions concerning energy efficiency. Report on the successes and challenges of implementing life-cycle cost effective projects. (Under EPACT, energy conservation projects that will pay back investment costs within 10 years must be undertaken).
- B. Facility Energy Audits.** Describe the number/percentage of agency facilities audited for energy and water efficiency during FY 2004, and the total percentage of facilities audited to date. (In accordance with EPACT and Executive Order 13123, approximately 10% of facilities should be audited each year). Agencies that have audited 100% of their facilities should describe their plans to implement a new cycle of audits.
- C. Financing Mechanisms.** Provide narrative information related to the use of Energy-Savings Performance Contracts (ESPCs) and Utility Energy Services Contracts (UESCs). (Note: Quantitative information related to ESPCs and UESCs will be reported on the Data Report and the Energy Scorecard). Report funding requested and received for FY 2004 and funding requested for FY 2005 for the performance of energy surveys/audits and for applied energy conservation measures (Note: This information will be reported on the Data Report).
- D. ENERGY STAR® and Other Energy-Efficient Products.** Describe steps taken to promote the purchase of ENERGY STAR® products and/or products that are in the upper



25 percent of energy efficiency and low standby power products as designated by FEMP. Note whether energy efficient criteria have been incorporated into all guide specifications and product specifications developed for new construction and renovation. Also note whether such criteria have been incorporated into product specification language. (See the ENERGY STAR® products and “green” products web sites by GSA [[www.fss.gsa.gov/environ](http://www.fss.gsa.gov/environ)], DOE [[www.eere.energy.gov/femp/technologies/eeproducts.cfm](http://www.eere.energy.gov/femp/technologies/eeproducts.cfm)], and EPA [[www.energystar.gov/products](http://www.energystar.gov/products)])

- E. ENERGY STAR® Buildings.** Report the number and percentage of buildings that have met the ENERGY STAR® Building criteria and have officially been designated ENERGY STAR® Buildings. (Buildings must rank in the top 25 percent in energy efficiency relative to comparable commercial and Federal buildings to be eligible for the ENERGY STAR® Buildings designation. See [www.energystar.gov](http://www.energystar.gov) ).
- F. Sustainable Building Design.** Report whether sustainable building design principles have been incorporated into the siting, design, and construction of new facilities. (See [www.wbdg.org](http://www.wbdg.org) for a description of sustainable building design principles).
- G. Energy Efficiency in Lease Provisions.** Describe how energy and water efficiency are considered when agencies enter into new leases or renegotiate/extend existing leases (e.g., preference for buildings with sustainable design and development, preference for certified ENERGY STAR® Buildings, etc.)
- H. Industrial Facility Efficiency Improvements.** Highlight activities undertaken to explore efficiency opportunities in energy-intensive facilities. This may include activity in the following areas: steam systems, boiler operation, air compressor systems, industrial processes, fuel switching, cogeneration, and other efficiency and renewable energy technologies.
- I. Highly Efficient Systems.** Describe new construction and/or retrofit projects for which combined cooling, heating, and power systems were installed. Report whether local natural resources were surveyed to optimize use of available biomass, geothermal, or other naturally occurring energy sources.
- J. Distributed Generation.** Describe the installation of non-renewable distributed generation technologies such as fuel cells, microturbines, generators (dedicated and peak shaving), and other power generation alternatives. Distributed generation from renewable sources (solar, wind, etc.) should have already been reported in Section II, part B. Some distributed generation projects could be grid connected and should be reported if used by the agency to reduce demand usage from the power grid.
- K. Electrical Load Reduction Measures.** Describe agency activities undertaken to reduce electricity load during power emergencies. These activities are required under the President’s Memorandum of May 3, 2001 on Energy Conservation at Federal Facilities. (See [www.eere.energy.gov/femp/about/legislation\\_directive.cfm](http://www.eere.energy.gov/femp/about/legislation_directive.cfm) for the directive.)

**IV DATA TABLES AND INVENTORIES.** Include the items listed below in the order given.

**A. FY 2004 Annual Energy Management Data Report.** A blank Data Report form and instructions for completing the form is included as Attachment 2 of this Guidance. Also include a Data Report for any revisions to past years' energy data along with an explanation for the revision.

**B. Energy Scorecard for FY 2004.** A blank Scorecard is included as Attachment 3 of this Guidance.

**C. Goals of Executive Order 13123 and NECPA/EPACT (optional).** This table was prepared by OMB/DOE and is attached to this guidance document. Agencies may wish to include this table in their Annual Reports for reference.

**D. Industrial and Laboratory Facilities Inventory.** This should include the following information: building name and building location (city and state).

**E. Exempt Facilities Inventory.** This should include the following information: building name, building location (city and state), and justification for exempt status.

**V. ATTACHMENT.** Attach a FY 2005 Implementation Plan to this FY 2004 Annual Report. Consult Attachment 4, *Guidance for Preparing the Federal Agency Implementation Plan for FY 2005*. \_\_\_\_\_

## Goals of Executive Order 13123 and NECPA/EPACT

### Executive Order 13123

Category	Goal	Comments
Greenhouse Gas Emissions	30% reduction by 2010	Base year is 1990. DOE will calculate agencies' progress toward this goal and report it on agencies' annual energy scorecards
Energy Efficiency		
Standard Buildings	<ul style="list-style-type: none"> <li>30% improvement by 2005</li> <li>35% improvement by 2010</li> </ul>	Base year is 1985
Industrial and Laboratory Facilities	<ul style="list-style-type: none"> <li>20% improvement by 2005</li> <li>25% improvement by 2010</li> </ul>	Base year is 1990
Exempt Facilities	N/A	Despite lack of quantitative goal, agencies should implement strategies to improve energy efficiency at these facilities.
Renewable Energy	<ul style="list-style-type: none"> <li>Implement renewable energy projects</li> <li>Purchase electricity from renewable energy sources</li> <li>Install 2,000 solar energy systems at Federal facilities by 2000</li> <li>Install 20,000 solar energy systems at Federal facilities by 2010</li> </ul>	Installation of Federal solar energy systems will help support the Million Solar Roofs initiative
Petroleum	Reduce petroleum use	Switches to alternative energy sources should be life-cycle cost effective
Source Energy	Reduce use of source energy	Accomplish by undertaking projects that are life-cycle cost effective
Water Conservation	Reduce water consumption*	Accomplish via life-cycle cost effective measures, energy-savings performance contracts, or other financing mechanism

### NECPA/EPACT

Energy Efficiency	20% improvement by 2000	Base year is 1985
Financing	Undertake all energy efficiency improvement projects that have a simple payback period of 10 years or less by 2005	E.O. 13123 expands this goal by mandating that any energy efficiency project that is life-cycle cost effective be undertaken
Audits	Conduct audits for energy efficiency on 10% of facilities annually	E.O. 13123 includes language supporting this goal

\* FEMP has established water efficiency improvement goals as directed by the Executive Order. Agencies must implement Water Management Plans and Best Management Practices according to the following schedule:

- 05% of facilities by 2002
- 15% of facilities by 2004
- 30% of facilities by 2006
- 50% of facilities by 2008
- 80% of facilities by 2010

For more detail, see the FEMP guidance document Water Efficiency Improvement Goal for Federal Agencies

## **Attachment 2**

### **FY 2004 Energy Management Data Report and Accompanying Instructions**

**(See separate file: DataReport04.xls  
for 5-page Data Report)**

## **INSTRUCTIONS FOR PREPARING THE FY 2004 ANNUAL ENERGY MANAGEMENT DATA REPORT**

### *What is the purpose of this information?*

Executive Order 13123 requires agencies to track and reduce their energy use in buildings and facilities. The Energy Policy Act of 1992 (EPAct) required agencies to reduce their energy use per square foot of office space by 20 percent, relative to use in 1985, by the year 2000. E.O. 13123 extends those goals for office buildings to a 30 percent reduction by 2005 and 35 percent by 2010, relative to 1985. E.O. 13123 also requires improvements in industrial and laboratory facilities: 20 percent (relative to 1990) by 2005 and 25 percent by 2010. Part 3 of E.O. 13123 requires agencies to include budgetary information on energy use and efficiency in their budgets and sets out requirements for an annual report to the President on progress toward the energy efficiency goals.

### *How will this information be used?*

The Department of Energy (DOE) will review and aggregate the numerical data and other information included in the report to the President and Congress to ensure the progress of each agency and to provide a government-wide picture of progress toward the mandated goals.

### *Do I need to report on energy use, costs, and efficiency?*

If your agency controls its Federally-owned building space or directly pays the utilities in its leased space, then you must report your agency's aggregate energy consumption for each of the fuel types listed below. Reporting on leased buildings may pose some difficulty depending on the nature of the lease (partially serviced, fully serviced). If your agency leases space from the General Services Administration, GSA is responsible for reporting energy data for that space. If all of your space is leased from GSA, and if you do not pay any energy surcharges, then you do not have to report any data in this section.

If your agency has been delegated responsibility by GSA for operation and maintenance of the buildings you occupy, then you are required to report energy consumption for these buildings for any years in which the buildings are under your control.

You must complete the applicable 12 tables shown in Data Report. Part 1 consists of six tables concerning energy consumption and cost data. Part 2 consists of six tables concerning energy efficiency improvements.

If your energy or water bills have different units of measurement from the ones required here, you must convert the data. For conversion units not given in the explanations for individual sections, refer to the detailed FEMP reporting guidance, which includes conversion tables.

### *(a) Tables 1-1, 1-2, and 1-3*

For each category of buildings and facilities (standard, industrial/lab/other energy intensive, and exempt), report how much of each of the following types of energy your agency used and how much you spent for that type of energy. If you know only one of these numbers, report that and the Department of Energy will estimate the other value based on the average national cost of each form of energy.

You must submit all data in the reporting units shown below for each energy type. For each quantity of energy consumed, round to the nearest tenth of an integer, (i.e., 1,289.3 megawatt hours). For cost data, enter the annual cost for each energy type in thousands of dollars, rounded to the nearest tenth of an integer, (e.g., \$77.4 for \$77,358).

<i>Energy type</i>	<i>Reporting unit</i>
Electricity	(megawatt hours)
Fuel oil	(thousands of gallons)
Natural gas	(thousand cubic feet)
LPG/propane	(thousands of gallons)
Coal	(short ton)
Purchased steam	(billion Btu)
Other	(billion Btu)

If you were able to enter cost data for all types of energy you used, then total the annual costs and enter that number, in thousands of dollars, in the space provided.

Report the gross square footage of the buildings and facilities in your agency's inventory for each reporting category. Enter this number in thousands of square feet, rounded to nearest tenth of an integer.

- (1) *Standard building or facility.* This category includes office and administrative buildings and any other building that does not specifically fit the criteria for an "industrial, laboratory, research, or other energy-intensive facility" or for an exempt facility. Refer to the DOE document, Criteria for Exempting Facilities from the Goals of Executive Order 13123 and Guidance for Reporting Exemptions for additional information.
- (2) *Industrial, laboratory, research, or other energy-intensive facilities.* This category includes data on buildings and facilities that by their nature have much higher energy consumption than standard office buildings. You can choose what measure of output or activity to use as a basis for computing energy efficiency. Your agency has the option of meeting the E.O.13123 energy reduction goals in these facilities in terms of energy use per square foot like standard buildings, or in terms of some other performance ratio, such as energy use per ton of material handled, per flight prepared, or per some other measure of productivity. Refer to section 203, Performance Goals for Industrial, Laboratory, Research, and Other Energy-Intensive Facilities, ([www.eere.energy.gov/femp/pdfs/eoguidancedoc.pdf](http://www.eere.energy.gov/femp/pdfs/eoguidancedoc.pdf)).
- (3) *Facilities exempt from meeting the E.O.13123 goals.* You should refer to the DOE document, Criteria for Exempting Facilities from the Goals of Executive Order 13123 and Guidance for Reporting Exemptions ([www.eere.energy.gov/femp/pdfs/eoguidancedoc.pdf](http://www.eere.energy.gov/femp/pdfs/eoguidancedoc.pdf)) to decide which facilities are exempt from the E.O.13123 energy-efficiency improvement goals. Although these exempt buildings are not subject to the requirements of Sections 202 and 203 of E.O.13123, you should still report energy consumption and cost data for them under the reporting category of "Exempt buildings," using the same method as for the standard buildings/facilities category.

*(b) Table 1-4. Non-Fleet vehicles and other equipment.*

Table 1-4 includes information on the fuel use of non-passenger vehicles and equipment and non-vehicle engines like mobile generators that is not captured by the Federal Automotive Statistical Tool (FAST) reporting system. For all liquid engine fuels, report your agency's total use in thousands of gallons of each type of fuel listed in the Data Report. If you used significant quantities of a fuel not listed, report its use in billions of Btu. (See the detailed FEMP reporting guidance for conversion tables if necessary.)

*(c) Table 1-5. Water consumption, cost, and efficiency measures.*

If your water bills have different units of measurement from the ones required here, you must convert the data. For conversion units, refer to the detailed FEMP reporting guidance which includes conversion tables.

*(d) Table 1-6. Renewable (“green”) energy purchases.*

With the advent of retail competition, Federal agencies have opportunities to purchase electricity in the competitive market from a retail supplier other than their local electric utility. In addition, Federal agencies have opportunities to purchase renewable energy from utilities as part of “green power” pricing programs. Your agency will get credit toward meeting the goals of E.O. 13123 by distinguishing “green energy” contracts from other power contracts, and reporting the portion of power attributable to renewable sources. Agencies should also indicate whether green energy purchase credit for energy efficiency goals should be applied to the standard buildings goal or the industrial/other energy intensive facilities goal.

- (1) *Purchases of renewable electricity.* Report the amount of renewable electricity you purchased from suppliers whose energy products are partially or completely derived from renewable sources. Your utility suppliers can tell you what percentage of the power is derived from renewables. Apply that percentage to both the gross usage and cost data to complete the table. For example, if you purchased 5,000 MWH under a “green energy” contract where 10% of the power is from renewables, you would report 500 MWH and 10% of the total cost.
- (2) *Purchased biomass or landfill gas (renewable energy sources).* For competitive purchases of natural gas from renewable energy sources, provide the annual usage (in millions of Btu) and the cost. Generally this would be purchased separately from other gas, so the renewable fraction is 100 percent. But if you purchased this gas in a mix with conventional natural gas, use the percentage mix to calculate and report the amount that is actually “renewable.”
- (3) *Purchased thermal energy from renewable energy sources.* For purchases of any form of thermal energy from renewable energy sources, provide the annual usage (in million BTU) and the cost.

*(e) Table 1-7. Self-generated renewable energy installed after 1990*

In order to get credit toward the renewable energy goal, agencies must provide information on self-generated renewable energy from systems installed after 1990. Because this energy is not reported in Tables 1-1, 1-2, or 1-3, it must be reported here to be counted toward the renewable energy goal. Agencies can count generation from renewable energy projects that use Federal land or resources if the agency played a role in facilitating a project’s development. Therefore, agencies should report the total energy generated by their projects (this is the amount that is credited toward the Federal goal). In addition, the agency should report the amount of this energy actually used by the agency, if excess generation is being sold to other entities.

*(f) Table 2-1. Direct agency obligations.*

These are obligations for energy or water efficiency incurred from appropriated funds, revolving fund accounts, or other accounts that belong to your agency; for example, obligations for purchases of compact fluorescent lights to replace incandescent bulbs, or replacement chillers paid for directly by your agency rather than through an energy savings performance contract. They do not include anything to be paid for or financed by a third party (e.g., a utility or energy-savings performance contractor). Report training data separately in table 2-5.

Provide information on the funds your agency obligated or plans to obligate for each reporting year. Enter amounts in thousands of dollars rounded to the nearest tenth of an integer.

*(g) Table 2-2. Energy savings performance contracts.*

Energy savings performance contracts (ESPCs) are contracts that allow a private-sector energy services

company (ESCO) to perform energy-efficiency improvements at a government facility using private financing, rather than the government paying for the work directly. The ESP contracts provide that the contractor guarantees a certain level of energy cost savings, and based on that guarantee, the government will pay the contractor over the agreed number of years amounts that cannot exceed the guaranteed savings in any year until the improvements have been paid off, including interest. Any negotiated performance period services provided by the ESP contractor, such as M&V and maintenance, are also paid for by the government over the term from within the guaranteed savings. ESPCs allow agencies to undertake more and larger efficiency improvements than their budgets might otherwise allow.

The first line of Table 2-2 will show the total number of new ESPC projects awarded by your agency during the reporting year. This includes delivery orders awarded under DOE Super ESPC blanket contracts and Department of Defense agency blanket contracts as well as site-specific ESPCs and shared energy savings contracts awarded by the U.S. Postal Service. DOE will make available to agencies data on their activity under its Super ESPC contracts to assist in compiling this table. Report new ESPCs signed during the reporting year, in the “number/thou \$” column. (Agencies should treat major modifications to existing contracts/delivery orders as new task/delivery orders in cases where the modifications significantly add work, investment value, and savings.) On the same line, in the “MMBTU” column, enter the total of the average annual energy savings anticipated from all ESPC projects awarded during the year, in millions of site Btu.

On the second line, enter the total investment value of new ESPCs signed during the reporting year. The investment value of an ESPC task/delivery order is the implementation price (for survey, study, design, construction, commissioning to acceptance, and markup—which includes indirect costs, such as overhead and profit) an ESCO charges to develop and implement the project. Excluded are the government payments (from guaranteed savings) to the contractor during the performance period term for debt repayment (principal and interest) and services (M&V, maintenance, etc.) Also excluded are the government’s administration costs, which agency budget offices will identify on the Circular A-11, Exhibit 55 form.

On the third line, enter the amount privately financed as a result of new ESPCs signed during the reporting year. The amount privately financed under an ESPC task/delivery order is the permanent financing principal borrowed to implement the project. It equals the investment value, less any utility or systems benefit administrator rebates or incentives, less any government pre-performance period payments, and plus any capitalized interest costs (e.g., construction period interest).

On the fourth line, enter the cumulative guaranteed cost savings of all of the ESPCs you reported on the previous three lines. Each ESPC has a schedule of cost savings to energy and related O&M budgets guaranteed by the ESCO. From these schedules, enter the sum of each year’s guaranteed cost savings.

On the fifth line, report the sum of each awarded ESPC task/delivery order’s total award value (contract price). This is obtainable from the schedule of fixed contractor payments that will be used by the ESCO for debt repayment and performance period services. For the fourth and fifth lines, report the actual contract-negotiated guaranteed cost savings and contract prices in nominal costs. Do not discount each year’s amounts to the present year value.

The last line is the total amount your agency paid or will pay to ESPC contractors during the reporting year as a consequence of all ESPCs signed to date.

*(h) Table 2-3. Utility energy services contracts.*

Utility Energy Service Contracts (UESCs) are similar to ESPCs, except the work is performed by utilities



(electric or gas) serving your agency's site. These contracts can either be negotiated directly by the site, or placed through an existing "area-wide agreement" the utility has with the General Services Administration to provide their commodity to the site.

The first line of Table 2-3 will show the total number of new UESC projects awarded by your agency during the reporting year. Report only new UESCs signed during that year, in the "number/thou \$" column. On the same line, in the "MMBTU" column, enter the average annual site energy savings anticipated from the UESCs awarded during the year, in millions of site Btu.

On the second line, enter the total investment value of new UESCs signed during the reporting year. (See instructions for ESPCs above for clarification of investment value.)

On the third line, enter the amount privately financed as a result of new UESCs signed during the year. (See instructions for ESPCs above for clarification of amount privately financed.)

On the fourth line, enter the cumulative cost savings of all of the UESCs you reported on the previous three lines. Each UESC has a schedule of cost savings to energy and related O&M budgets estimated by the utility/contractor. From these schedules, enter the sum of each year's cost savings.

On the fifth line, report the sum of each awarded UESC's total award value (contract price). This is obtainable from the schedule of fixed payments that will be used by the utility for debt repayment and performance period services. For the fourth and fifth lines, report the actual contract-negotiated cost savings and contract prices in nominal costs. Do not discount each year's amounts to the present year value.

The last line is the total amount your agency paid or will pay to utilities/contractors during the reporting year as a consequence of all UESCs signed to date.

*(i) Table 2-5. Training.*

Enter the number of Federal personnel or on-site contractors in your agency who received or are expected to receive energy management training in each year, and also enter your expenditures (or budget) during each of those years for energy management training. When counting the number of people who received training, include only people who received organized instruction (i.e., seminars, workshops, conferences), not those who received general-information items like flyers reminding people to turn out lights and turn off computers. The cost of such general information items intended to raise energy awareness among all employees can be included in the training budget entries, however. Travel costs associated with this training should also be included in the cost of the training.

Attachment 3

Agency Energy Scorecard for FY 2004

**(See separate file: Scorecard04.rtf  
for 3-page Scorecard)**

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## Attachment 4

### Guidance for Preparing the Federal Agency Energy Management Implementation Plan for FY 2005

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## **Guidance for Preparing the Agency Energy Management Implementation Plan for FY 2005**

The Implementation Plan should be formatted as described below. The format generally follows the outline for the Annual Report. Although the Implementation Plan will be submitted as an attachment to the Annual Report, the Plan should be considered a stand-alone document. Therefore, please do not refer to the Annual Report for Section I, Part A, or for any other part of the Plan that you feel may be redundant with the Annual Report. This Plan should be brief and should describe only activities planned for the next fiscal year.

**I. Management and Administration.** This section will describe (1) the agency's establishment of an energy management infrastructure and (2) the agency's plans to use management tools in implementing Executive Order 13123.

### **A. Energy Management Infrastructure**

- 1. Senior Agency Official.** Identify the agency's senior energy official and describe the official's role and responsibilities.
- 2. Agency Energy Team.** Identify the members of the team and describe the team's responsibilities.

### **B. Management Tools**

- 1. Awards (Employee Incentive Programs).** Describe the agency's plans to use employee incentive programs to reward exceptional performance in implementing Executive Order 13123.
- 2. Performance Evaluations.** Describe agency plans to include successful implementation of provisions of Executive Order 13123 in the position descriptions and performance evaluations of members of the agency energy team and facility/energy managers.
- 3. Training and Education.** Describe plans to ensure that all appropriate personnel receive training for energy management requirements. Describe plans to develop and implement agency outreach programs that include education, training, and promotion of ENERGY STAR® and other energy efficient products for Federal purchase card users.
- 4. Showcase Facilities.** Describe plans to construct or renovate exemplary facilities that the agency plans to designate as Showcase Facilities. Discuss why the facilities will be considered Showcase Facilities (i.e., discuss the facility design, the improvements made in energy or water efficiency, the use of renewable energy, etc.).

**II. Implementation Strategies.** The purpose of this section is to describe plans to use strategies to reduce energy consumption and improve energy efficiency. It is not expected that each agency will employ every strategy; rather, each strategy identified in Executive Order 13123 is listed as a subsection to remind agency officials of the existence of these strategies and to encourage their use where practical and life-cycle cost effective. If certain strategies will not be used, please explain why not.

- A. Life-Cycle Cost Analysis.** Outline plans to institute procedures to ensure the use of life-cycle cost analysis in making investment decisions about in products, services, construction, and other projects to lower the Federal Government's costs and to reduce energy and water consumption. Report on plans to implement the 10-Year Simple Payback Rule. (Under EPACT, energy conservation projects that will pay back investment costs within 10 years must be undertaken).
- B. Facility Energy Audits.** Describe the number/percentage of agency facilities that will be audited for energy and water efficiency during the next fiscal year. (Approximately 10% of facilities should be audited each year). Describe the prioritization criteria for audits (e.g., oldest facilities, most energy intensive facilities, etc.).
- C. Financing Mechanisms.** Provide narrative information related to the planned use of Energy-Savings Performance Contracts (ESPCs) and Utility Energy Services Contracts (UESCs).
- D. ENERGY STAR® and Other Energy-Efficient Products.** Describe steps to be taken to promote the purchase of ENERGY STAR® products and/or products that are in the upper 25 percent of energy efficiency as designated by FEMP. Note whether energy efficient criteria will be incorporated into all guide specifications and product specifications developed for new construction and renovation. Also note whether such criteria will be incorporated into product specification language. (See the ENERGY STAR® products and “green” products web sites by GSA [[www.fss.gsa.gov/enviro](http://www.fss.gsa.gov/enviro)], DOE [[www.eere.energy.gov/femp/technologies/eeproducts.cfm](http://www.eere.energy.gov/femp/technologies/eeproducts.cfm)], and EPA [[www.energystar.gov/products](http://www.energystar.gov/products)]).
- E. ENERGY STAR® Buildings.** Report the number and percentage of buildings that, in the next fiscal year, are expected to meet the ENERGY STAR® Building criteria and to be officially designated ENERGY STAR® Buildings. (Buildings must rank in the top 25 percent in energy efficiency relative to comparable commercial and Federal buildings to be eligible for the ENERGY STAR® Buildings designation. See [www.energystar.gov](http://www.energystar.gov)).
- F. Sustainable Building Design.** Report whether sustainable building design principles will be incorporated into the siting, design, and construction of new facilities. (See [www.wbdg.org](http://www.wbdg.org) for a description of sustainable building design principles).
- G. Energy Efficiency in Lease Provisions.** Describe how energy and water efficiency will be considered when agencies enter into new leases or renegotiate/extend existing leases (e.g., preference for buildings with sustainable design and development, preference for certified ENERGY STAR® Buildings, etc.).
- H. Industrial Facility Efficiency Improvements.** Highlight planned activities to explore efficiency opportunities in energy-intensive facilities. This may include activity in the

following areas: steam systems, boiler operation, air compressor systems, industrial processes, fuel switching, cogeneration, and other efficiency and renewable energy technologies.

- I. Highly Efficient Systems.** Describe plans for new construction and/or retrofit projects for which combined cooling, heating, and power systems will be installed. Report whether local natural resources will be surveyed to optimize use of available biomass, geothermal, or other naturally occurring energy sources.
- J. Distributed Generation.** Describe plans for installing new solar hot water, solar electric, solar outdoor lighting, small wind turbines, fuel cells, and other off-grid alternatives.
- K. Renewable Energy Purchases.** Describe agency plans to encourage the purchase of electricity and thermal energy generated from renewable sources.
- L. Electrical Load Reduction Measures.** Describe agency plans for implementing electrical load reduction measures to be taken during power emergencies to cut electricity consumption in buildings and facilities. (See the directive on the FEMP web site at [www.eere.energy.gov/femp/about/legislation\\_directive.cfm](http://www.eere.energy.gov/femp/about/legislation_directive.cfm).)
- M. Water Conservation.** Highlight activities to be undertaken to improve water efficiency. Discuss plans to develop and implement Water Management Plans and Best Management Practices for efficient use of water (Note: See the document entitled *Guidance to Establish Water Efficiency Improvement Goal for Federal Agencies* on FEMP's Web site ([www.eere.energy.gov/femp/pdfs/eoguidancedoc.pdf](http://www.eere.energy.gov/femp/pdfs/eoguidancedoc.pdf))).



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## **Attachment 5**

### **Reporting Units and Conversion Factors for Federal Energy Management Reporting**

## **REPORTING UNITS AND CONVERSION FACTORS FOR FEDERAL ENERGY MANAGEMENT REPORTING**

### **Standard Buildings/Facilities**

### **Industrial, Laboratory, and Other Energy-Intensive Facilities**

### **Exempt Facilities**

<i>Fuel Type</i>	<i>Reporting Units</i>	<i>BTUs per Reporting Unit</i>	<i>Joules per Reporting Unit</i>	<i>GigaJoules (GJ) per Reporting Unit</i>
Electricity	Megawatt Hour (MWH)	3,412,000	3,599,660,000	3.59966
Fuel Oil	1,000 Gallons	138,700,000	146,328,500,000	146.3285
Natural Gas	1,000 Cubic Feet	1,031,000	1,087,705,000	1.087705
LPG/Propane	1,000 Gallons	95,500,000	100,752,500,000	100.7525
Coal	Short Ton	24,580,000	25,931,900,000	25.9319
Purchased Steam	Billion Btu (BBtu)	1,000,000,000	1,055,000,000,000	1,055.0
Other	Billion Btu (BBtu)	1,000,000,000	1,055,000,000,000	1,055.0

### **Vehicles/Equipment**

<i>Fuel Type</i>	<i>Reporting Units</i>	<i>BTUs per Reporting Unit</i>	<i>Joules per Reporting Unit</i>	<i>GigaJoules (GJ) per Reporting Unit</i>
Auto Gas	1,000 Gallons	125,000,000	131,875,000,000	131.875
Diesel	1,000 Gallons	138,700,000	146,328,500,000	146.3285
LPG/Propane	1,000 Gallons	95,500,000	100,752,500,000	100.7525
Aviation Gas	1,000 Gallons	125,000,000	131,875,000,000	131.875
Jet Fuel	1,000 Gallons	130,000,000	137,150,000,000	137.150
Navy Special	1,000 Gallons	138,700,000	146,328,500,000	146.3285
Other	Billion Btu (BBtu)	1,000,000,000	1,055,000,000,000	1,055.0

### **Other Conversion Factors**

100 Cubic Feet (Ccf) = 748 Gallons	1 Liter = 0.264 Gallons
1 Acre-Foot = 325,851 Gallons	1 Cubic Meter = 264 Gallons